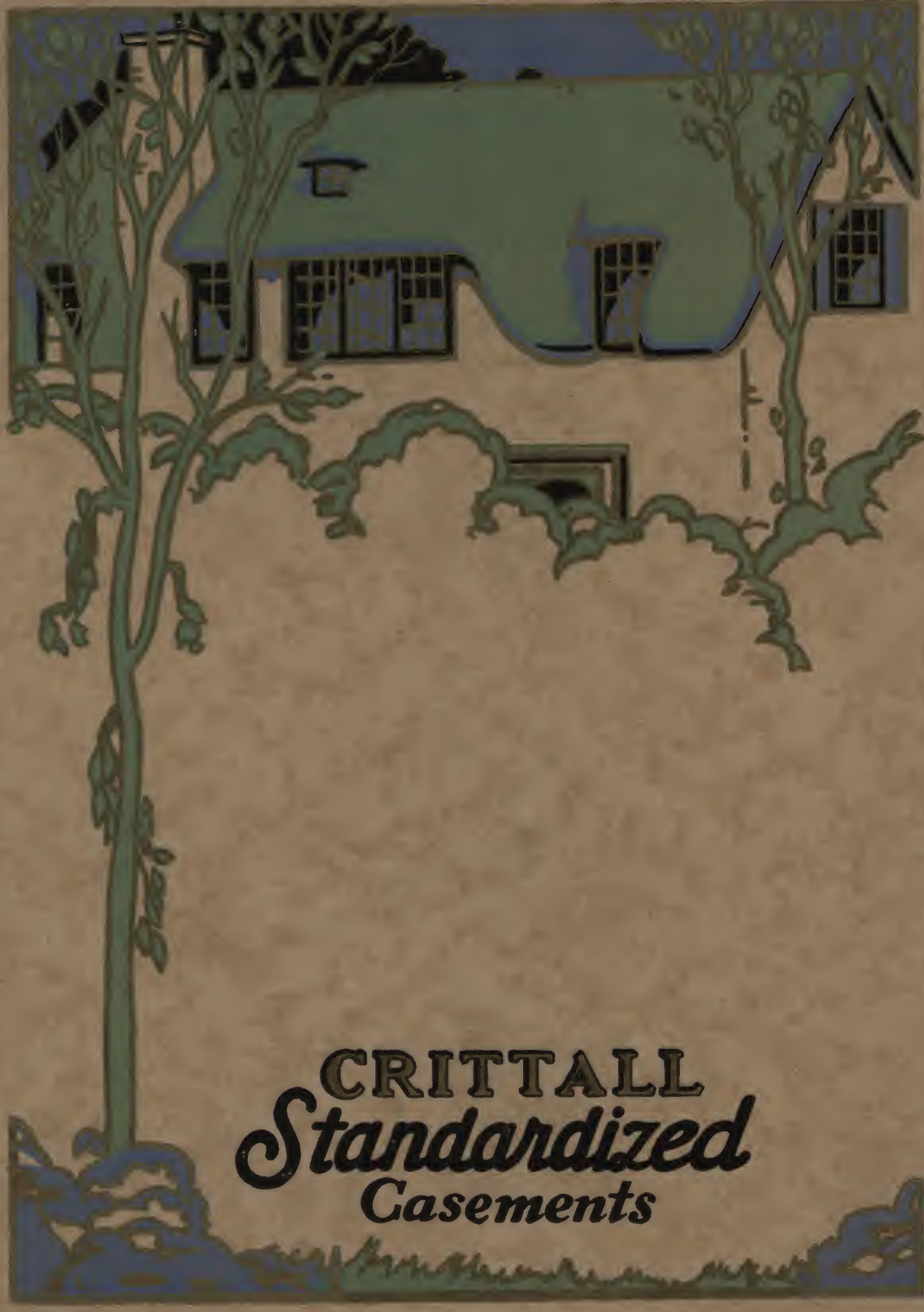


A.I.A. • No. 16-e-1 • Standardized Casements • CRITTALL Casement Window Company • DETROIT, MICHIGAN

J. T. Mann & Company, Inc.,
319 Dryades St.,
New Orleans, La.
Phone Main 332,



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This catalog is designed to be a complete handbook on casement windows for residential use.

From even the large number of photographs of *Standardized* installations which were available, it was occasionally found that there were none which would *exactly* illustrate the point under discussion. Under such circumstances it has been thought fitting and proper to use photographs of our specially built casements and of *Standardized* samples prepared for the purpose. The chief use of such samples is to illustrate screening and cleaning.

Such substitution is in no sense intended to be misleading to the architect, but is done with the idea of making this catalog of the utmost service to him.

CRITTALL CASEMENT WINDOW COMPANY

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CRITTALL *Standardized* Casements

♦
ARCHITECTS'
CATALOG
No. 1-26
♦

CRITTALL CASEMENT WINDOW COMPANY
Manufacturers

Main Office and Works: DETROIT, MICHIGAN

New York Office: 101 PARK AVENUE
Cincinnati Office: 708 GERKE BUILDING
Chicago Office: 105 WEST MONROE STREET

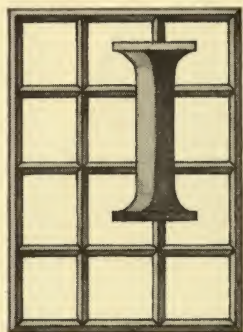
Atlanta Office: 1520 HEALEY BUILDING
Los Angeles Office: 616 SOUTH ANDERSON STREET
Cleveland Office: BUILDERS EXCHANGE

Agents in all principal cities



◆ A CHARMING NOOK FOR READING, SEWING OR TAKING ONE'S EASE. AIRY IN SUMMER, WARM
IN WINTER, LIGHT AND CHEERFUL ALWAYS. TASTEFUL DRAPES, BLENDING WITH THE BEAU-
TIFUL WINDOWS, GIVE A RESTFUL AIR AND ARE DECIDEDLY DECORATIVE ◆

A SUGGESTION FOR THE ARCHITECT



It is not sufficient for either architect or manufacturer to know that a manufacturer's product is well made, mechanically right, and performs well. It is equally necessary that the product entering the home should appeal to the owner.

That Crittall *Standardized Casements* have this appeal in the highest degree, proved time after time, is their best recommendation to the architect.

It is a remarkable fact that we have seldom sold a casement installation but that the owner in some way expressed great pleasure and satisfaction in his windows. We have had many customers voluntarily send us the names of friends about to build, as they wanted their friends to have the same satisfactory windows. We have sold many partial installations and the owner's comment is invariably the same: "Oh, how I wish I had known more about Crittall Casements. If I had known how much I would like them, I would have used them in the whole house."

Average folk give little thought to windows, except as to placing them. They are too used to the rather commonplace wood window to expect or desire better. Here, then, is the architect's opportunity to make a recommendation which will usually meet with minimum resistance and which, when the house is completed, will result in permanent satisfaction on the owner's part.

The architect's greatest aim must always be to satisfy his client. From the very nature of our windows it would be absurd for us to guarantee the owner's satisfaction or refund

the money. Too much collateral work would be injured or rendered useless by the necessity of putting in other windows. Yet, after over twelve years' experience selling steel casement windows, we gladly stake our reputation for reliability on the simple statement that the owner will be pleased with Crittall *Standardized Casements*.

In general, we accept windows philosophically. If we give them much thought, we must admit the average double hung window is ugly. Its blank expanse of clear glass has no decorative value, and when it is divided into panes by wood muntins, it is hard to wash. Before we can tolerate it from the inside, it must be heavily shaded and draped so that most of it is covered, thus defeating the very purpose of a window.

Our *Standardized Casements* are beautiful. Their small leaded panes are easily washed. Even when glazed with large lights of plate glass, they are immensely superior since their proportions are graceful and their hardware pleasing. They not only lend themselves easily to the architect's design; they blend with it and enhance its value. They fit a wide range of styles with equal adaptability. Being made of steel, they are permanent and are not affected by climatic changes. They are *guaranteed* weather-tight by a concern whose experience in this one field has extended over more than twelve years.

Prices are moderate. Certainly these windows cost more than wood windows and more than steel windows of a quality which must be weather-stripped. But the extra cost is small and the windows are well worth the extra expense required. Standard units at standard prices (available to all architects) protect both architect and client.



A cost that can be afforded on the smallest home
A quality that will grace the most exclusive work

ON this page are illustrated the exteriors of a very pretentious home and of a modest one, and the interiors of an expensive residence and of one not so costly.

In all these settings *Standardized Casements* are equally adaptable. Their quality pleases the most exacting; their price can be afforded by those whose expenditures must be closely watched.

It is impossible to quote exact comparative costs as the price of wood windows varies

so. In computing the cost of wood sash, the total cost must be figured, including hardware, weights, extra coats of paint, carpenters' time in setting and trimming mill work, attaching hardware, etc.

To secure the advantages of Crittall *Standardized Casements* does require an extra expenditure, but this extra expenditure is never very great compared to the total cost of the house and in some cases it is so small as to be negligible.

Enduring quality is worth a small extra cost





Styles of architecture in which casements may be used

ESTABLISHED custom and precedent almost demand the use of casement windows in English residence architecture. The modern American home frequently follows no set style, but is a product of good taste and convenience in which casement windows may be used with perfect architectural harmony. Many examples of both types can be found in this catalog.

Above is illustrated a residence in Italian style which fittingly uses casement windows. On another page is shown a detail of a Spanish residence with beautiful steel casements used to enhance the natural beauty of the home. Nor is this all. Norman Peasant Cottage

types, English Cottage type architecture and many other styles may appropriately use casements. The only outstanding style where casement windows are not perfectly adaptable, perhaps, is the American Colonial; but even in this style a partial installation of casement windows can be in good taste.

Below, to the right, is pictured a Dutch Colonial home with casement windows in the first floor. The casement windows do not detract from the typical Dutch Colonial characteristics. To the left is illustrated a New England Colonial home with casement windows used in the sun porch, a use long sanctioned by good architects.





Inward opening casements with curtains and hangings both drawing from the sides across the whole opening; used with a valance.



Inward opening casements with individual curtains on each window and overdrapes to draw from the sides; no valance used.

Drapes

DRAPES should be simple and should show as much of the windows as possible. Casement windows are ornamental and need not be hidden by elaborate hangings.

Shades are practical when conditions require them, but they are not desirable with casement windows as they detract from the beauty of the windows. They may be omitted and their cost deducted from the window cost or added to the purchase of more beautiful curtains.

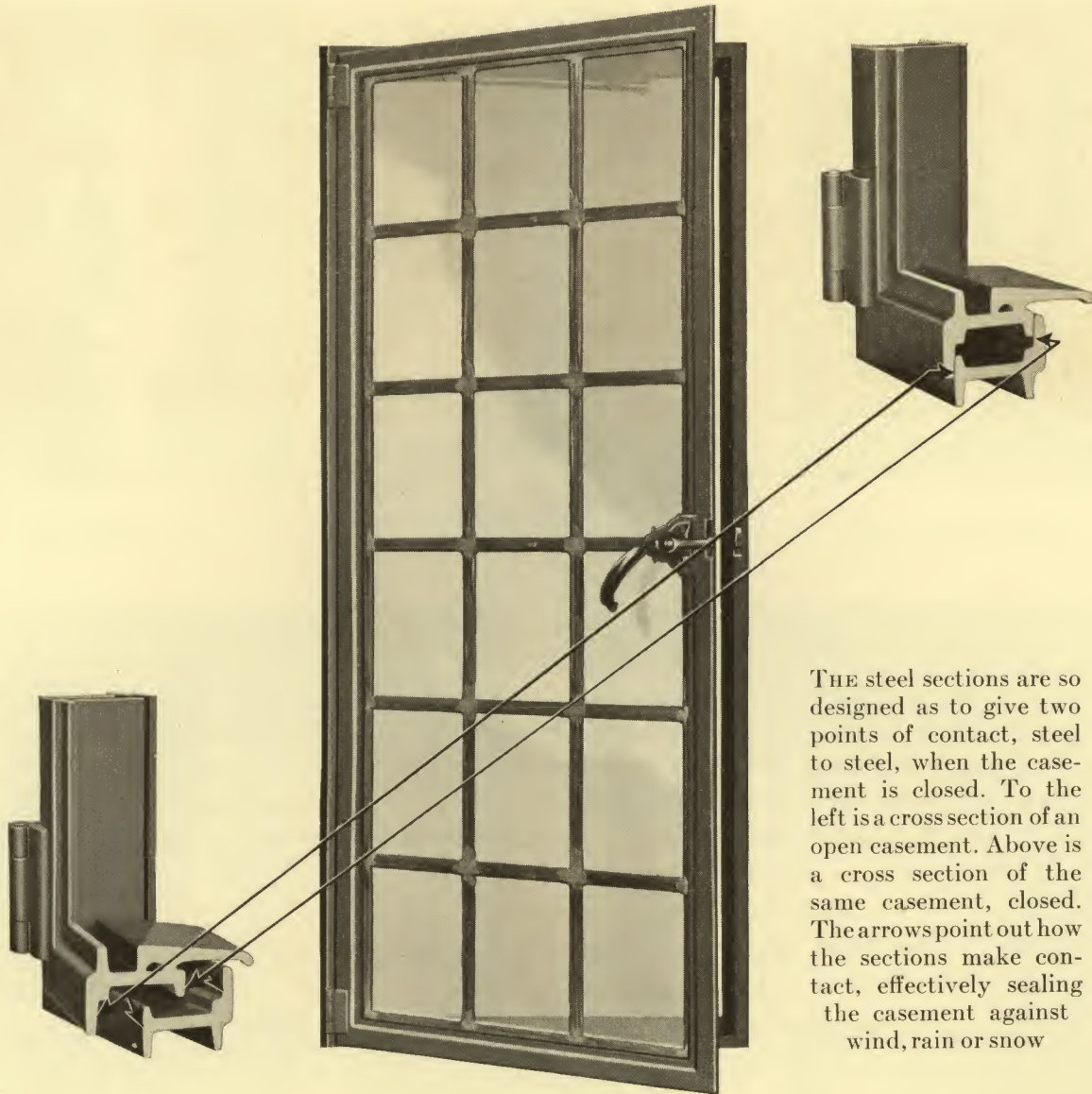
The usual treatment of casement windows is to use a draw curtain of some light neutral tint to control the light with a heavier overdrape to add a decorative note and to insure privacy when desired.

Outward opening casements with casement curtains and overdrapes both arranged to draw from the sides; used with a valance.



Outward opening casements with single curtains without valance. Single drapes, carefully chosen, may serve for both light control and privacy.





THE steel sections are so designed as to give two points of contact, steel to steel, when the casement is closed. To the left is a cross section of an open casement. Above is a cross section of the same casement, closed. The arrows point out how the sections make contact, effectively sealing the casement against wind, rain or snow

Why Crittall *Standardized* inward opening casements are weatherproof

OUR *Standardized* Casements are made of strong heavy sections. Such sections are accurately rolled, so that careful workmen can, and do, fit them together closely. They do, actually, make contact at two points. Once the casements are properly fitted, they are sufficiently strong to retain this fit indefinitely.

The hardware is adequate. Solid bronze handles, with a lever action, draw the swing-

ing leaves tight against the stationary steel frames. A substantial drip bar at the sill protects the open joint.

We have made weathertight inward opening casements for over twelve years. When we guarantee them you can be certain that we know our guarantee will be fulfilled.

Standardized inward opening types cost no more than outward opening.



Inward opening casements with simple stationary screens outside

Suggestions for screening



An outward opening casement with inside rolling screen

INWARD opening casements have stationary outside screens similar to those used on the ordinary wood window. Outward opening casements must have inside screens. In order to open and close the windows and to clean them, inside screens must be made to open. Three different methods of inside screening are illustrated.

Any of the screen arrangements shown on this page can be supplied by the local representative of a good screen manufacturer.

Paired casements, outward opening, with inside sliding screens. Screens slide past each other, left and right



A detail view of our through-the-screen operator further shown at the right. The casement can be easily opened and closed without opening the screens. This operator can be furnished in malleable iron or solid bronze

Paired casements, outward opening, with inward opening wood screens and through-the-screen operators





Ease of cleaning is an important feature

ABOVE is illustrated a single outward opening casement with projecting hinges which permit cleaning the outside of the glass from inside the room. Such hinges may be used on all outward opening casements, but it is more economical and more customary to apply them only to single sash and to the end casement of a group.

To the left is illustrated the cleaning of an inward opening casement. Nothing could be easier. To the right is shown the cleaning of paired outward opening casements without cleaning hinges. The mullion is our steel mullion No. 103, but any mullion which is not too broad or which does not project too far permits the same easy cleaning.



THE architect will appreciate the diversity of effect possible with *Standardized* Casements. To an elaborate interior they add their own stately ornamental effect. To a more modest room they give dignity without formality. In all their uses there is something homelike, cheerful and friendly about them which exerts a gentle influence on all who enter rooms lighted and ventilated by these windows. The charm of the completed home will insure the satisfaction of the architect's client.





To the exterior Crittall *Standardized* Casements contribute as much as to the interior. Through the use of one size or another, and the many possible combinations, an architect may add height to the home or may give a long, low effect. He may choose formally regular window openings or quaintly irregular arrangements. The use of leaded glass allows the pane arrangement to be optional with the architect and forestalls any possibility of the completed residence having a commercial air.





Casements for every room in the house

THE charm of the casement window literally pervades the interior. A stairwell window, shown below, usually is visible from the entrance hall, casting its welcoming light as a greeting to the guest of the house. Next comes the living room, shown below and on the opposite page.

Here surely the comfort, convenience and airy grace of the steel casement add a decorative touch in keeping with the character of the room.

The dining room is always light and well ventilated. The sun room with casement windows is a room so comfortable and restful that it can hardly be resisted. Nor is the kitchen made less comfortable by having windows which open wide to invite the vagrant breezes. Above all other rooms the chamber, for comfort, needs the free passage of air best given by casement windows. Surely the charm of casement windows graces each room equally!

STAIRWELL



LIVING ROOM





LIVING ROOM

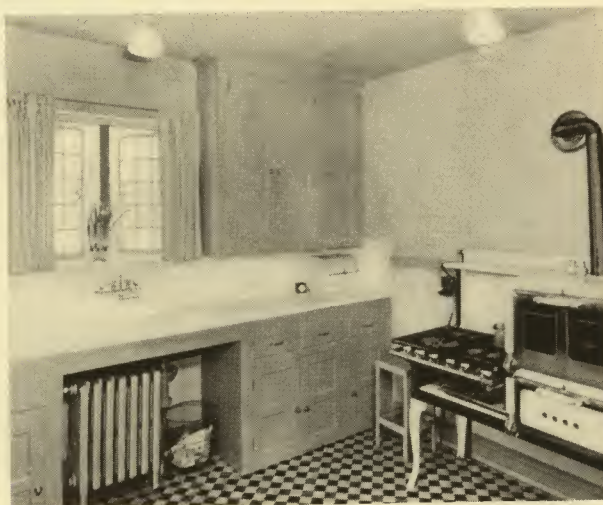


DINING ROOM



SUN ROOM

CHAMBER



KITCHEN

CHAMBER





A partial installation is sometimes desirable

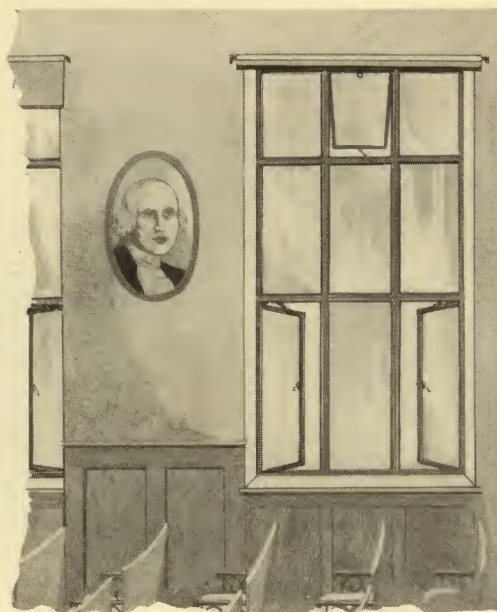
OCCASIONALLY it is desired to combine casement and double hung windows in the one residence. That such combinations are not incongruous is shown by the photographs above. The topmost photograph illustrates the use of inward opening casements to give better ventilation in a bedroom while sliding windows are used elsewhere. At the left is shown an installation of Crittall *Standardized* Casements with double hung windows used in the rear elevation for the sake of economy. As pictured at the right the comfort and convenience of a solarium may be greatly increased through the use of casements even though the main portion of the house has another type of window.



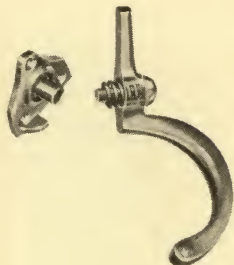
Crittall Standardized casements
are adaptable to many types of buildings

THE sketches on this page may suggest a few of the varied uses possible for these casements. For the shops so frequently located on second floors of office buildings *Standardized* Casements with specially built stationary center sash give show window effectiveness. A university dormitory can use standard sizes

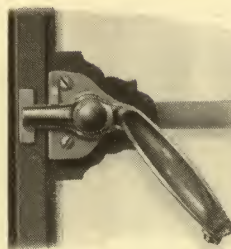
with marked economy. Civic buildings or school auditoriums may have large windows of standard units. Arched or cusped head church windows may be executed as detailed on page 29, while Sunday School windows may be these casements with excellent effect.



A coiled spring
is concealed
in all handles



Handle No. 1006
is standard
equipment



Standards of construction and materials

HARDWARE. All handles are of solid bronze of government standard. Typical of the care given to details is the coiled spring, illustrated above, which is concealed in each handle to take up all wear and prevent rattles. The friction stay, shown below, is bronze finished. It is adjustable to meet local wind conditions.

WELDING. Handle plates are securely welded to the casement sections. All corners of sash and frames are electrically welded, giving maximum strength.

COPPER BEARING STEEL. The steel throughout is Crittalloxy—the copper bearing steel. Paint clings to this steel with great tenacity, forming an unusually good protection. In ad-

dition Crittalloxy is rust-resisting *and even if left unpainted* it would outlast two or three times the life of ordinary steel.

PAINTING. All steel receives one coat of red rust-resisting paint and one coat of dark gray shop paint, each coat baked on separately. Final paint should be applied on the job by the painter to dress up the casements after the wear of shipping and erecting.

WORKMANSHIP. The workmanship throughout is of the finest. Over twelve years' devotion to the exclusive manufacture of steel and bronze casement windows has bred in us a love of the beautiful and enduring, and a pride in our craftsmanship which keep our standards high and safeguard our customers.



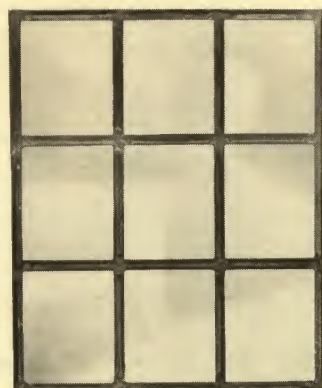
Adjusting
a friction stay
to suit
local winds



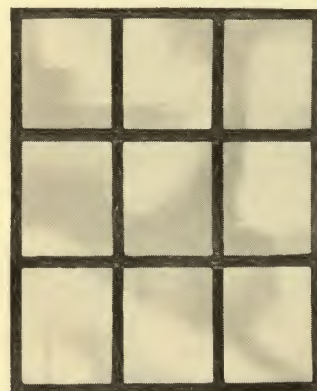
A typical
welding machine
in operation



Glass set in $\frac{5}{8}$ -inch hard metal bars



Glass set in $\frac{5}{8}$ -inch reinforced lead cames



Glass set in $\frac{5}{8}$ -inch reinforced antique lead cames

Glass

GLASS may be set in lead cames when small panes are desired or it may be large sheets of plate glass when large lights are preferred. Below at the right is given an example of the use of leaded glass, while at the left is an example of clear plate. Each is admirable in its own way.

When leaded glass is used the glass itself may be D. S. A., Libby-Owen quality, or polished plate. These are named in the order of their quality and cost. In connection with the glass the cames may be hard metal bars, used for economy in certain localities, reinforced lead cames, which are used in the majority of work, and antique lead cames, which are used only in exclusive work where the cost does not interfere. We can supply very good quality leaded glass when local sources are not available.



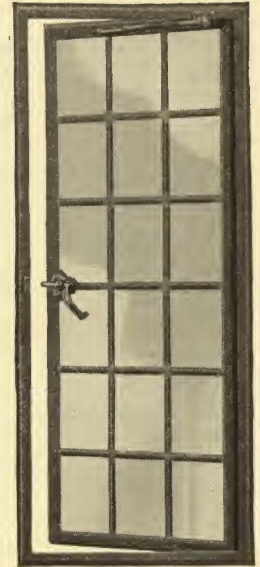


82 X
Not glazed

Standard side hinged types

Sizes and types

STANDARD sizes are shown on page 22. Side hinged types are made to open out or open in, in the following sizes: 1'-8'' wide by 2'-0'', 3'-0'', 4'-0'' and 5'-0'' high. These may all be combined with transom bars and mullions and thus serve to give a very wide range of sizes which scarcely limit the architect's skill. Of course special sizes can be made when required but at increased cost.



82 X
With leaded glass

Hardware

SIDE hinged casements are fitted with substantial solid bronze handles, beautifully finished and pleasingly designed. At the head of each casement is a friction stay, bronze finished, to hold the casement open in any desired position. This stay may be left as it is or painted to match the casement when the final paint is applied. The stay is easily adjusted with a screw-driver and when once adjusted to meet local wind conditions it holds for years.

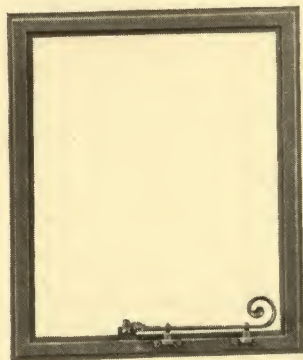
All hinges are solid bronze. They are amply strong, fitted with hardened steel pins, well finished. They may be ordinary butts or at a small extra cost we can supply projecting butts for ease of cleaning. See page 11.



83 X
Not glazed

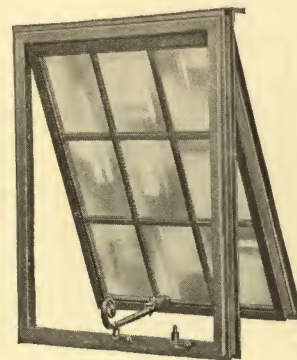


83 X
With leaded glass



24 X
Not glazed

Standard transom types



24 X
With leaded glass

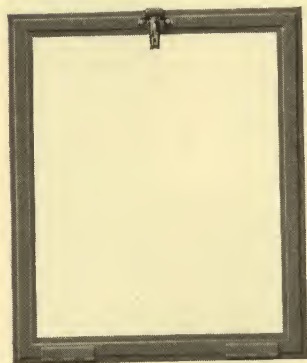
Sizes and types

TRANSOM sash consist of Top Hinged Outward Opening (24 X or Y) and Bottom Hinged Inward Opening (25 X or Y) Casements as shown on page 22. A stationary sash (Type 21 X or Y) may also be used, or Side Hinged Types No. 22 or 23, X or Y, may also be used as transoms. Stationary or inward opening transoms should be used over inward opening types below and stationary or outward opening transoms over outward opening side hinged casements to facilitate screening. Few transoms need to be ventilating units as they are commonly used for a small amount of ventilation in severe weather.

Hardware

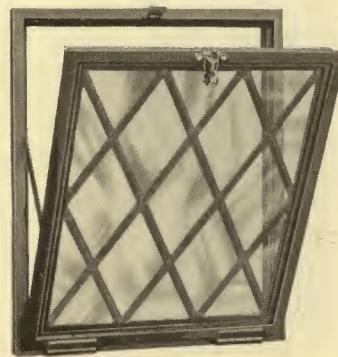
Top Hung Casements are fitted with a beautiful solid bronze peg stay, No. 107, for operation by hand. Two and three-quarter inches between sash and screen rebates should be allowed for hardware clearance. Bottom Hung Casements are fitted with spring catch No. 2 AS, of solid bronze, for operation by pole, or by hand if within reach. Side arms, concealed when the window is closed, hold the windows in position when open.

All hardware is finished a dark statuary bronze color. This beautiful bronze coloring in conjunction with graceful designs is in keeping with the general perfection of *Standardized* Casements.

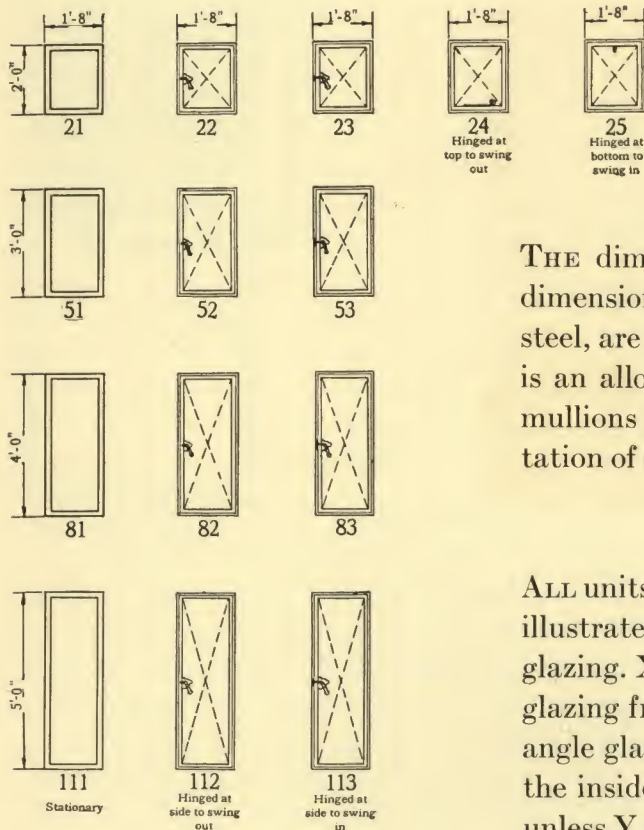


25 X
Not glazed

25 X
With
leaded glass



Standard sizes and types

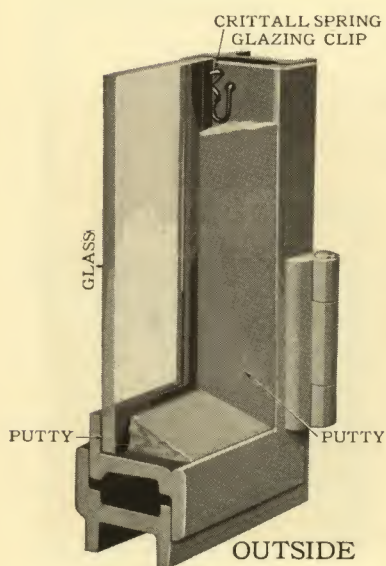


Dimensions

THE dimensions given on this page are sash opening dimensions. The actual sash sizes, from out to out of steel, are $\frac{1}{4}$ " less in width and height. This quarter inch is an allowance for setting and also takes care of steel mullions and transom bars. See also page 27 for computation of masonry openings.

X and Y Types

ALL units shown above are made in both X and Y types, illustrated below. This type letter refers to the method of glazing. X types are prepared with spring clips for putty glazing from the outside. Y types are furnished with an angle glazing stop (at slight extra cost) for glazing from the inside. X types are always estimated and furnished unless Y types are specifically mentioned.

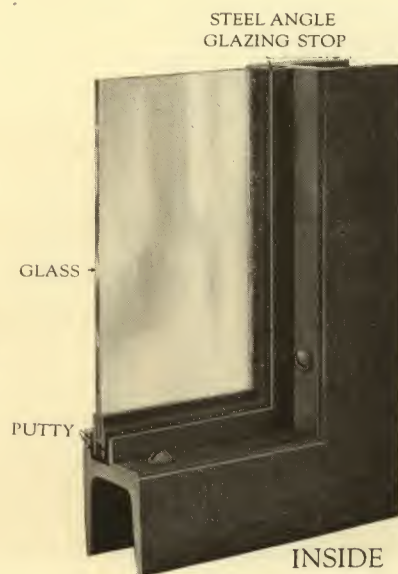


X Type

A side hinged casement

Y Type

A stationary window



Special windows and doors

THE Crittall Casement Window Company has for years been engaged solely in the manufacture of specially built steel casement windows and doors. Such work is built to the architect's sizes, designs and specifications. Necessarily it is the best fine workmanship can produce.

From time to time we have executed contracts for such outstanding architects, amongst many others, as the following: Marston & Van Pelt, Los Angeles; George W. Kelham, San Francisco; Harry J. Manning, Denver; Howard Shaw, Weary and Alford, Chicago; Smith, Hinchman and Grylls and Albert Kahn, Detroit; McKim, Mead and White, Cass Gilbert, New York; Day and Klauder, Philadelphia; A. Ten Eyck Brown, Atlanta. Work for such architects must measure up to a very high standard indeed.

Special work may range from the simple to the elaborate. The solarium illustrated below is done with standard solid bronze hardware. The casements in the large group



of windows below are fitted with special hand wrought iron hardware patterned after the work of old-time smiths. The door illustrated above shows both our work on doors and our work with curved heads, which, while expensive, are entirely practical in many shapes.

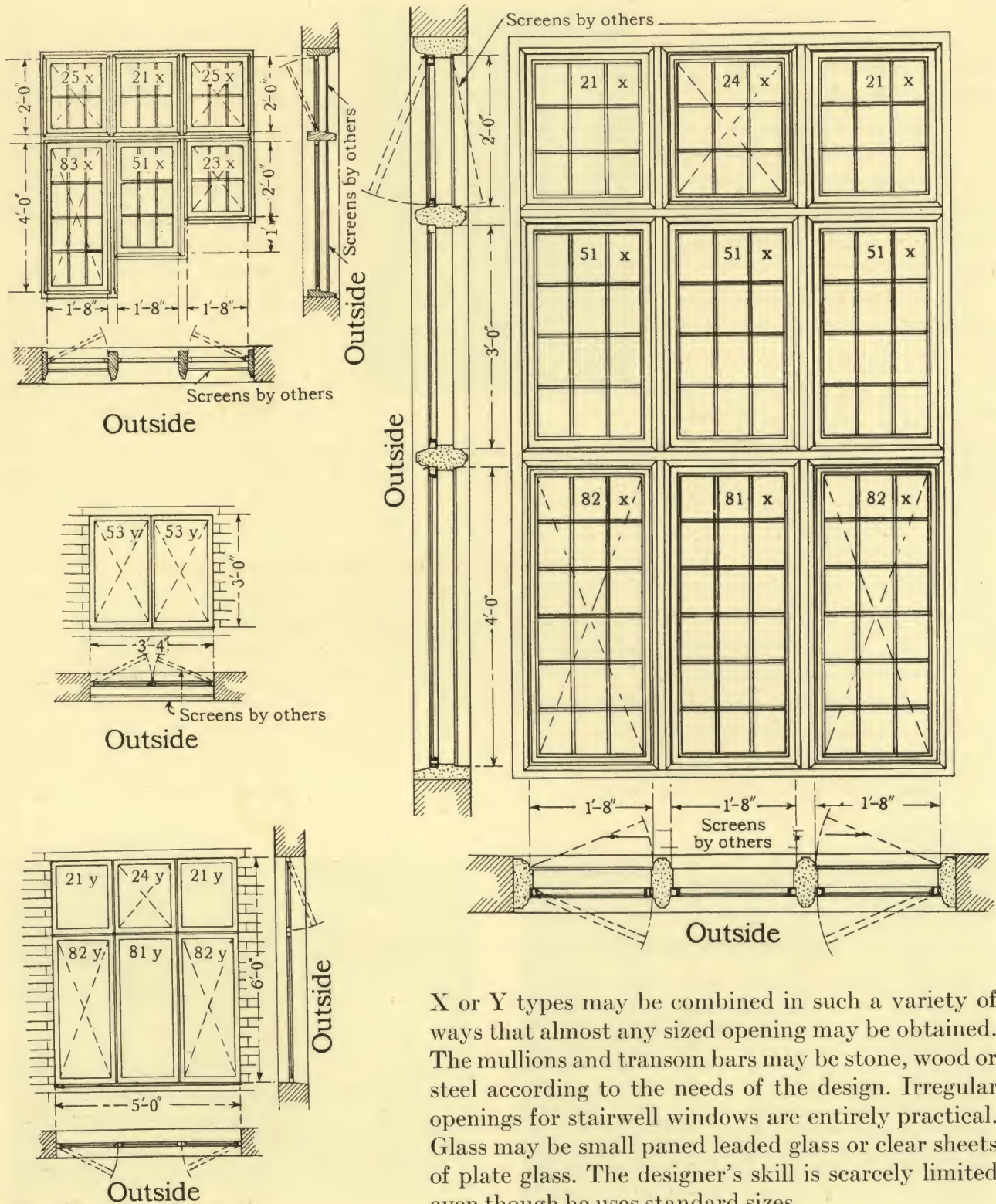
It is impossible to give any idea of the cost of custom-built windows. Architects are welcome to preliminary estimates which can be made while drawings are in progress. At this stage it is often possible for our sales engineers to make suggestions which make large savings. There is no obligation incurred by asking for an estimate.

The design and construction of special windows may conform to that of *Standardized Casements*. Thus a few special sizes may often be used in a *Standardized* installation without the cost being noticeable.

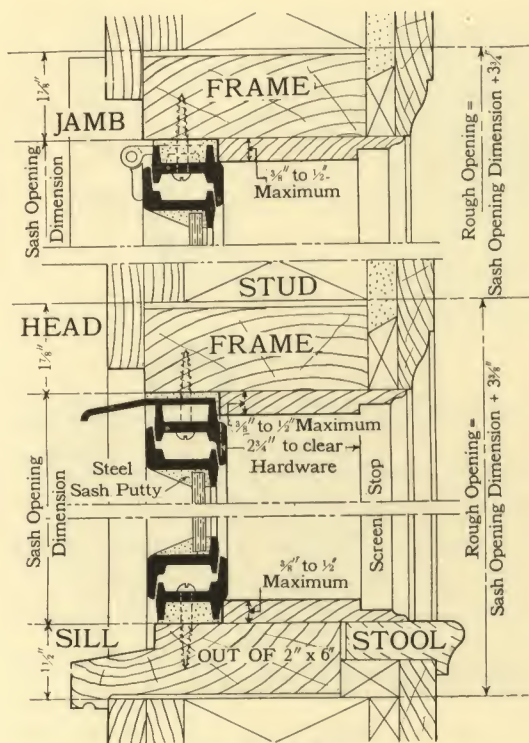
Special windows are fully shown in our Catalog No. 25 on Crittall Universal Casements, to which all architects are welcome.



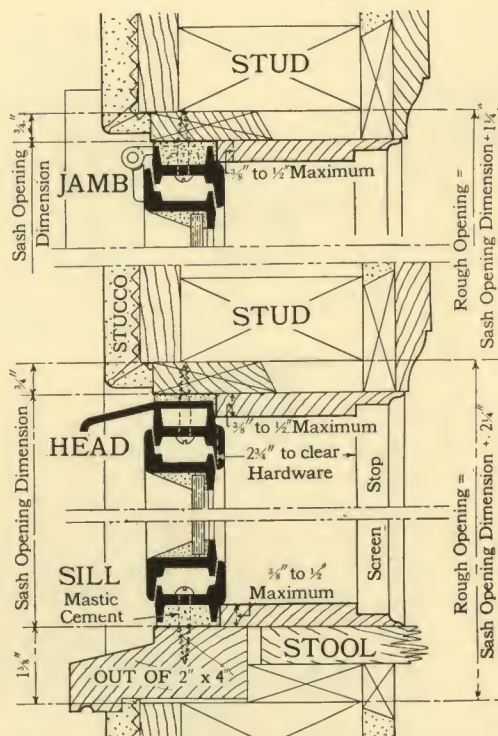
Large window openings



X or Y types may be combined in such a variety of ways that almost any sized opening may be obtained. The mullions and transom bars may be stone, wood or steel according to the needs of the design. Irregular openings for stairwell windows are entirely practical. Glass may be small paned leaded glass or clear sheets of plate glass. The designer's skill is scarcely limited even though he uses standard sizes.



Detail of X Types

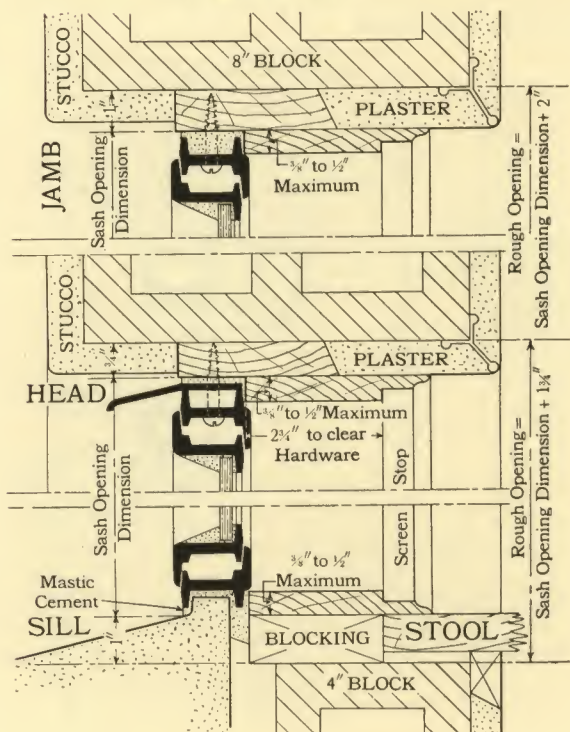


Detail of X Types

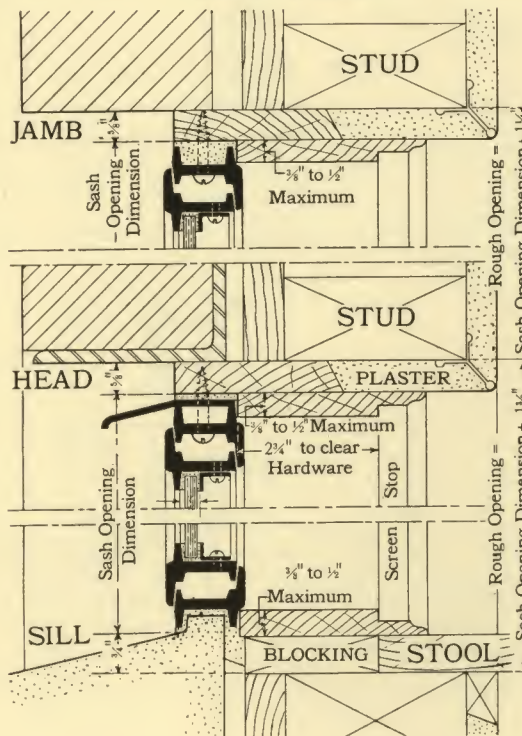
Quarter full size details outward opening casements

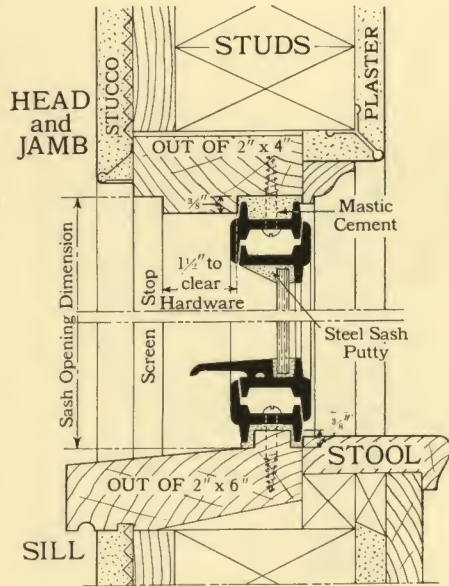
These details are suggestions only. They are intended to assist
the architect in devising his own details

Detail of X Types

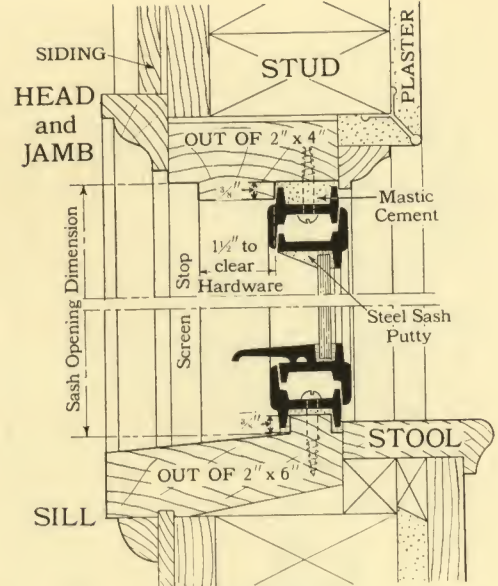


Detail of Y Types





Detail of X Types



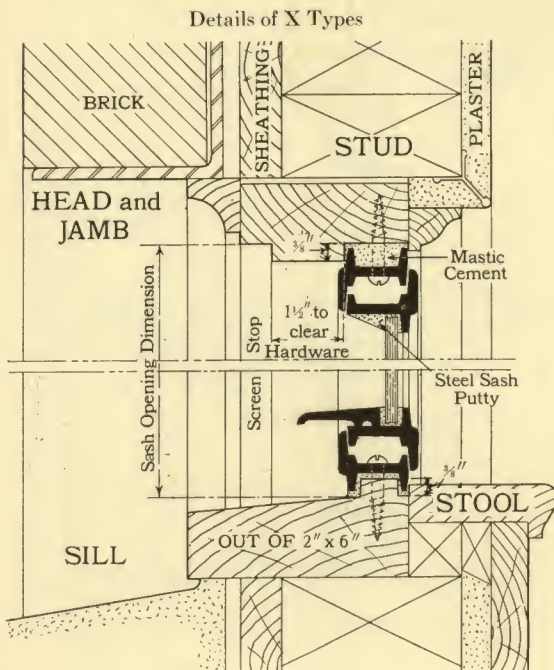
Detail of X Types

Quarter full size details inward opening casements

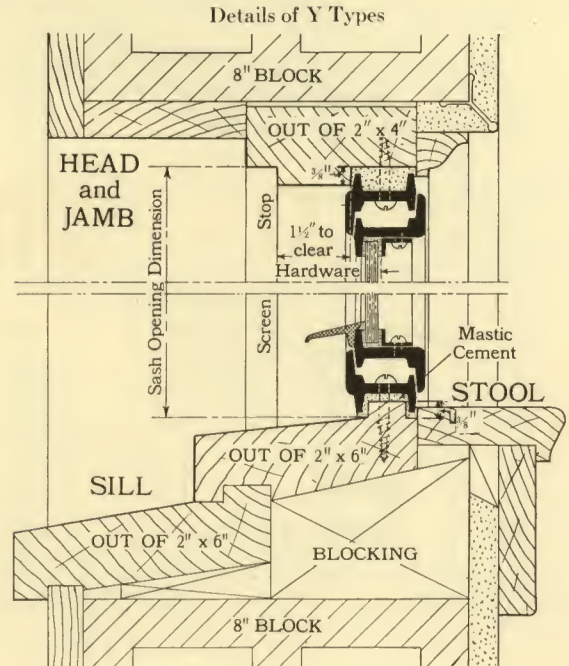
WE will supply architects with full size details of any of the constructions shown. We also have other details perhaps of equal interest, and when special details are required we will gladly co-operate with architects in preparing drawings which meet such conditions.

Shades are not often used with casement windows. Where they are needed on inward opening casements they are attached directly to the sash.

Care should be taken in detailing to see that shade brackets do not foul against jambs when sash are open.



Details of X Types

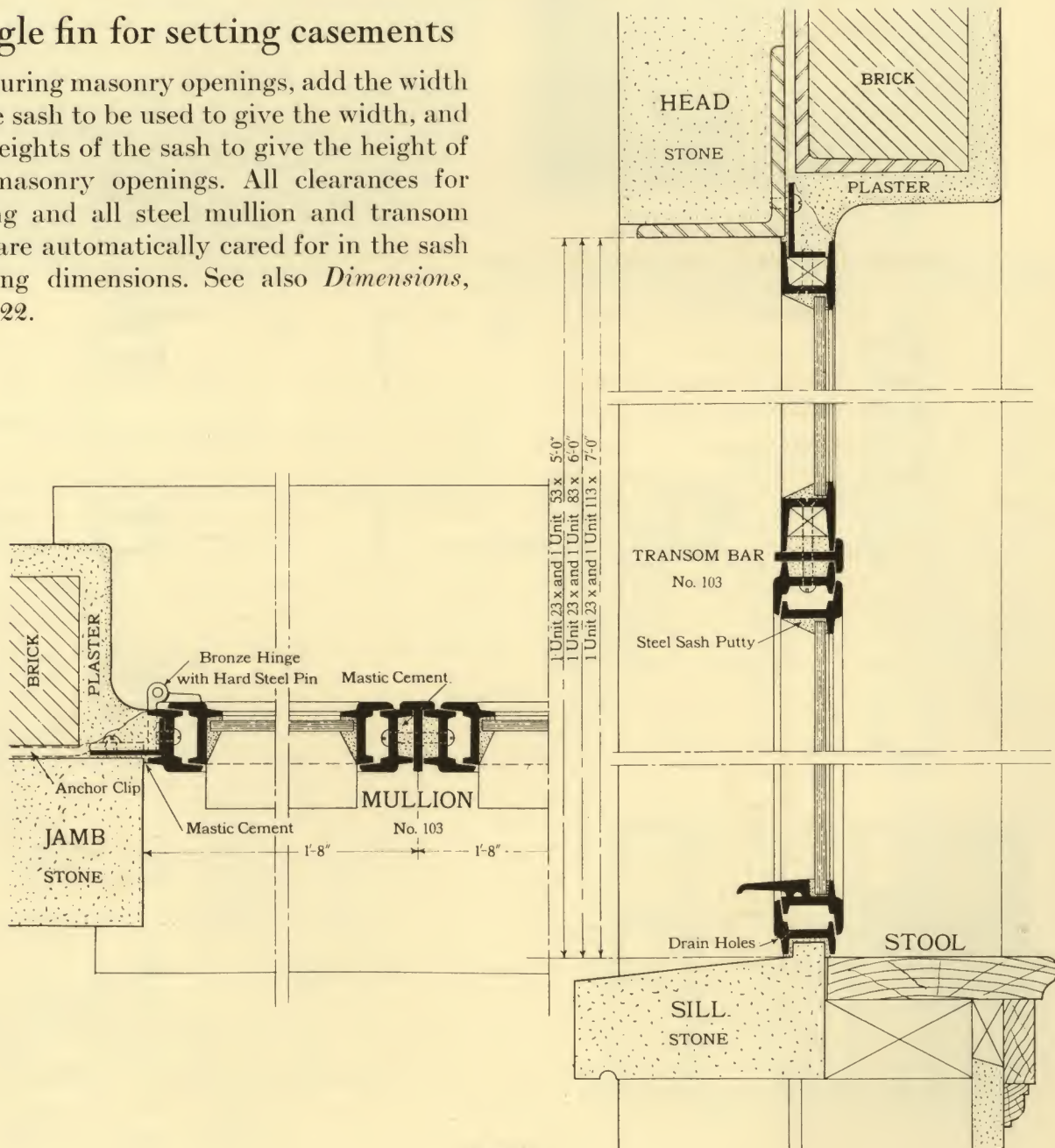


Details of Y Types



Angle fin for setting casements

IN figuring masonry openings, add the width of the sash to be used to give the width, and the heights of the sash to give the height of the masonry openings. All clearances for setting and all steel mullion and transom bars are automatically cared for in the sash opening dimensions. See also *Dimensions*, page 22.

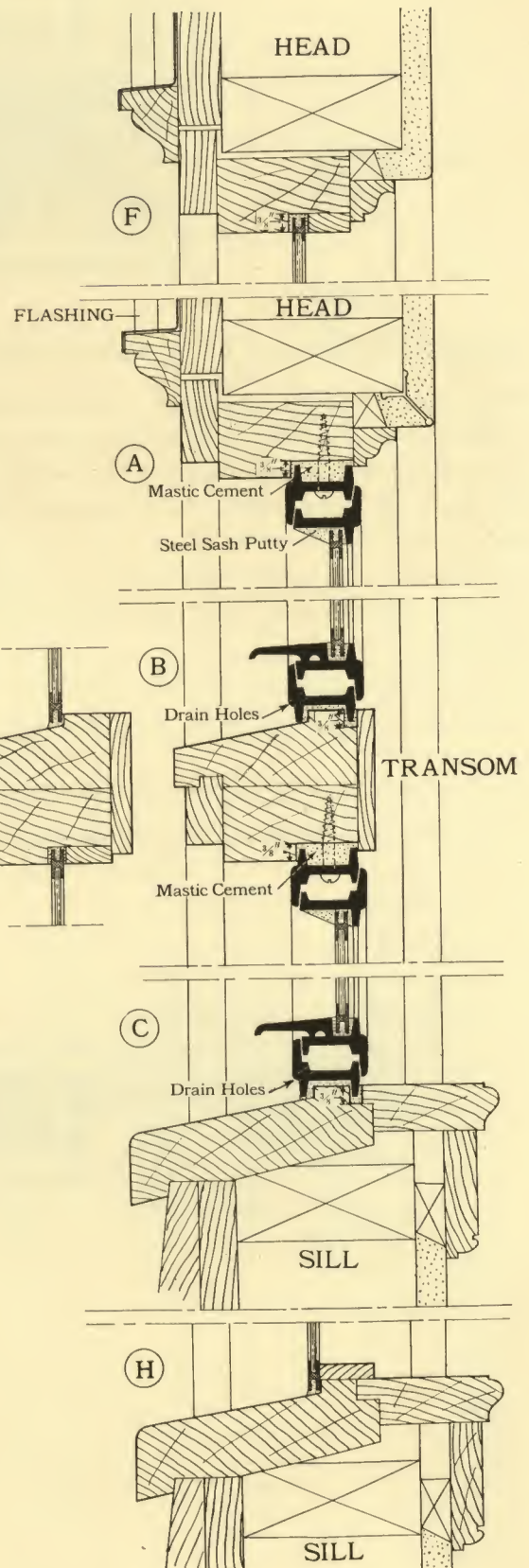
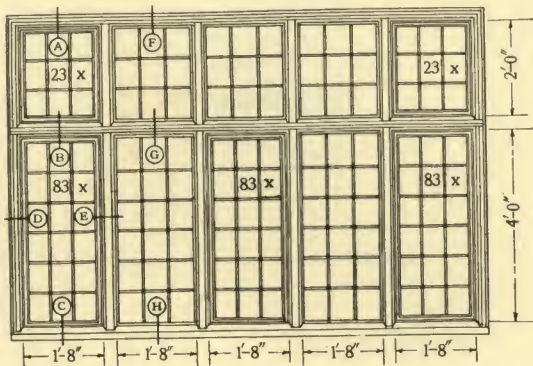
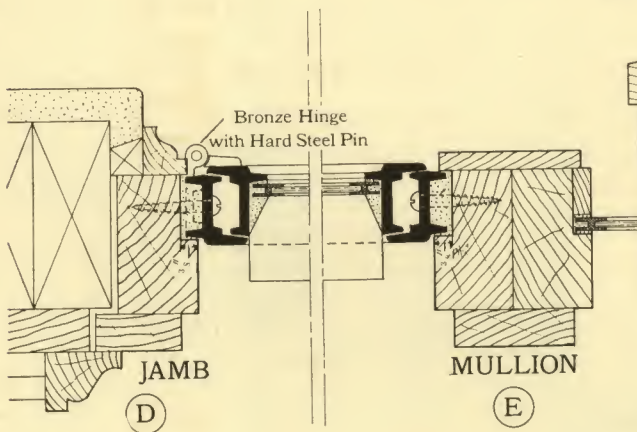


Economical details for large window openings for English type residences



Quarter full size details

FOLLOWING old English precedents, only the ventilating units are steel sash. Where fixed lights occur the leaded glass is set directly into the wood frame without using steel sash

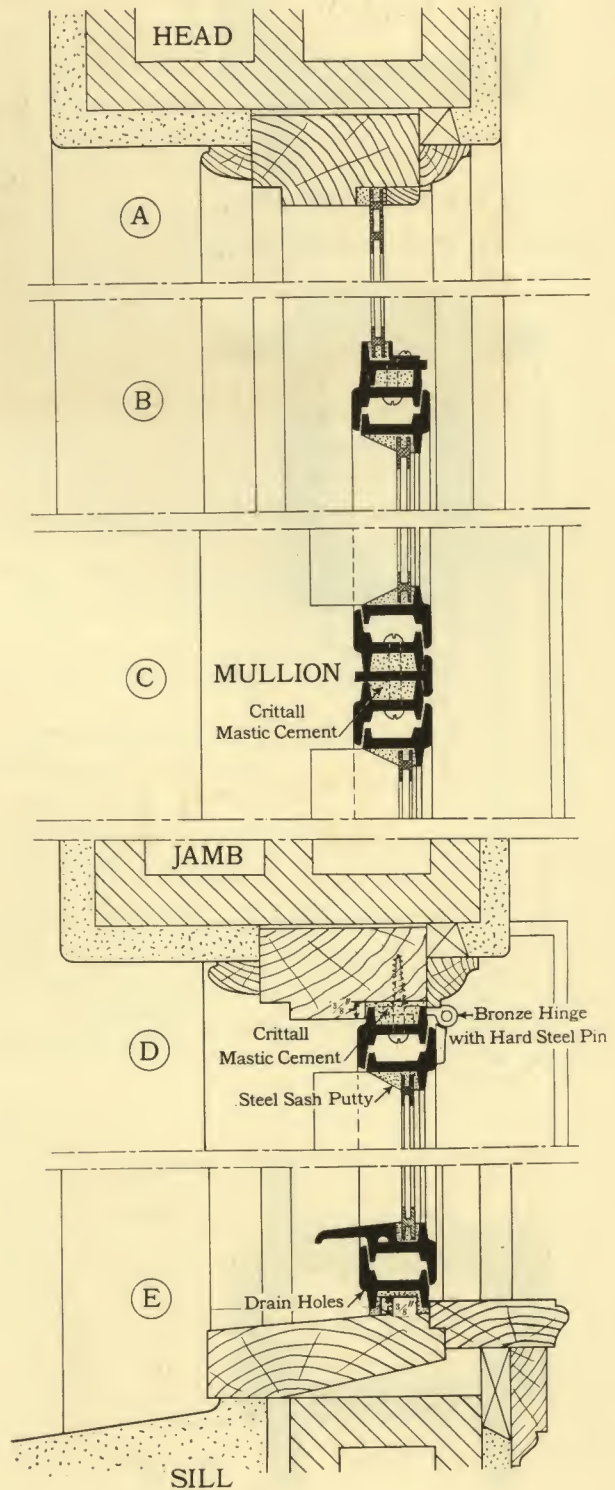
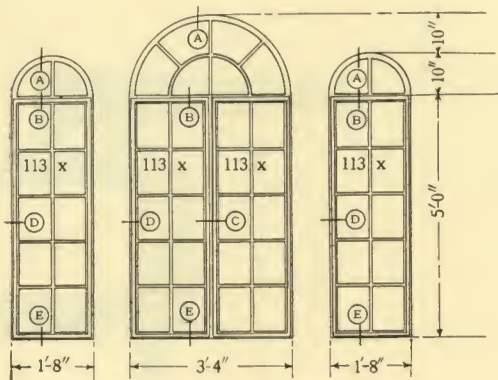


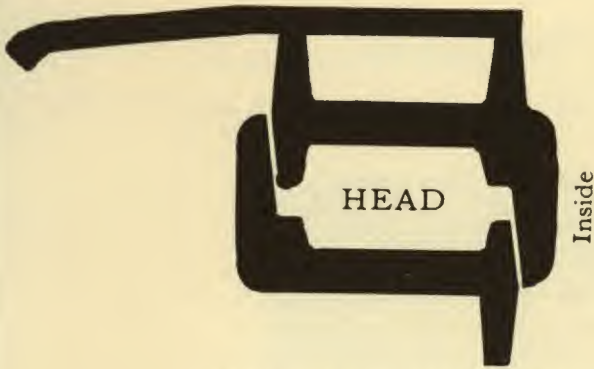
Economical details for curved heads for Spanish and Italian style residences



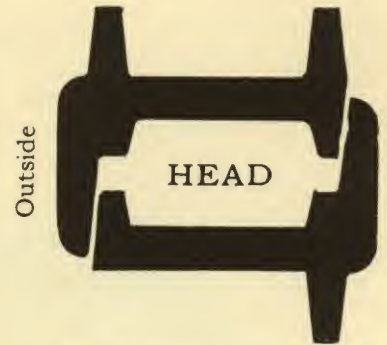
Quarter full size details

CURVED heads may be specially made in either ventilating or stationary units but they are expensive. Here is shown a detail for glazing leaded glass into the head of our sash and directly into the wood frame above. A broad lead margin carries the sight line of the sash below.





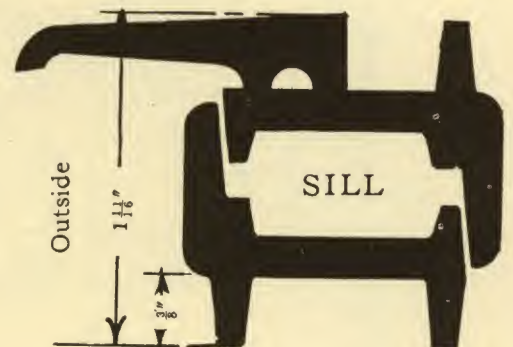
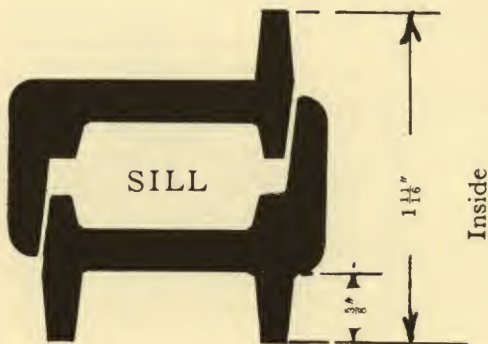
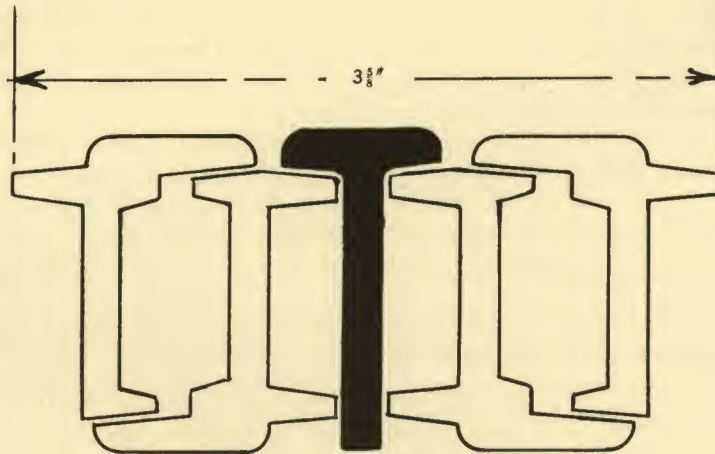
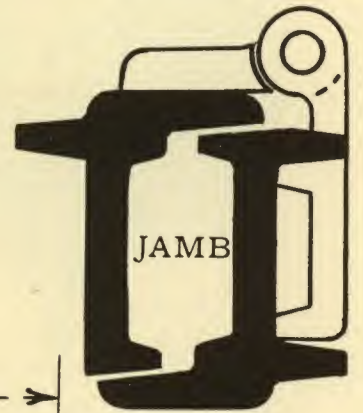
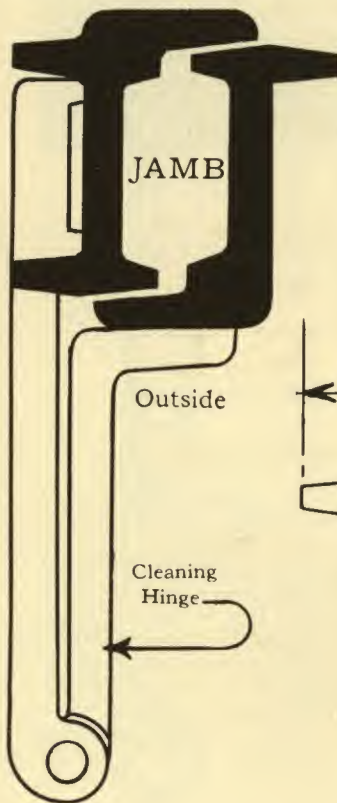
OUTWARD OPENING
SIDE HUNG CASEMENT



INWARD OPENING
SIDE HUNG CASEMENT

FULL SIZE
SECTIONS
X

TYPES



Specifications

ALL windows (state elevations and exceptions) shall be *Standardized* Casements as manufactured by the Crittall Casement Window Company, Detroit, Michigan. They shall be the types and sizes shown by numbers on the elevations. They shall be made according to the standards of manufacture set forth in the Crittall Catalog No. 1-26, (this catalog) complete with solid bronze hardware.

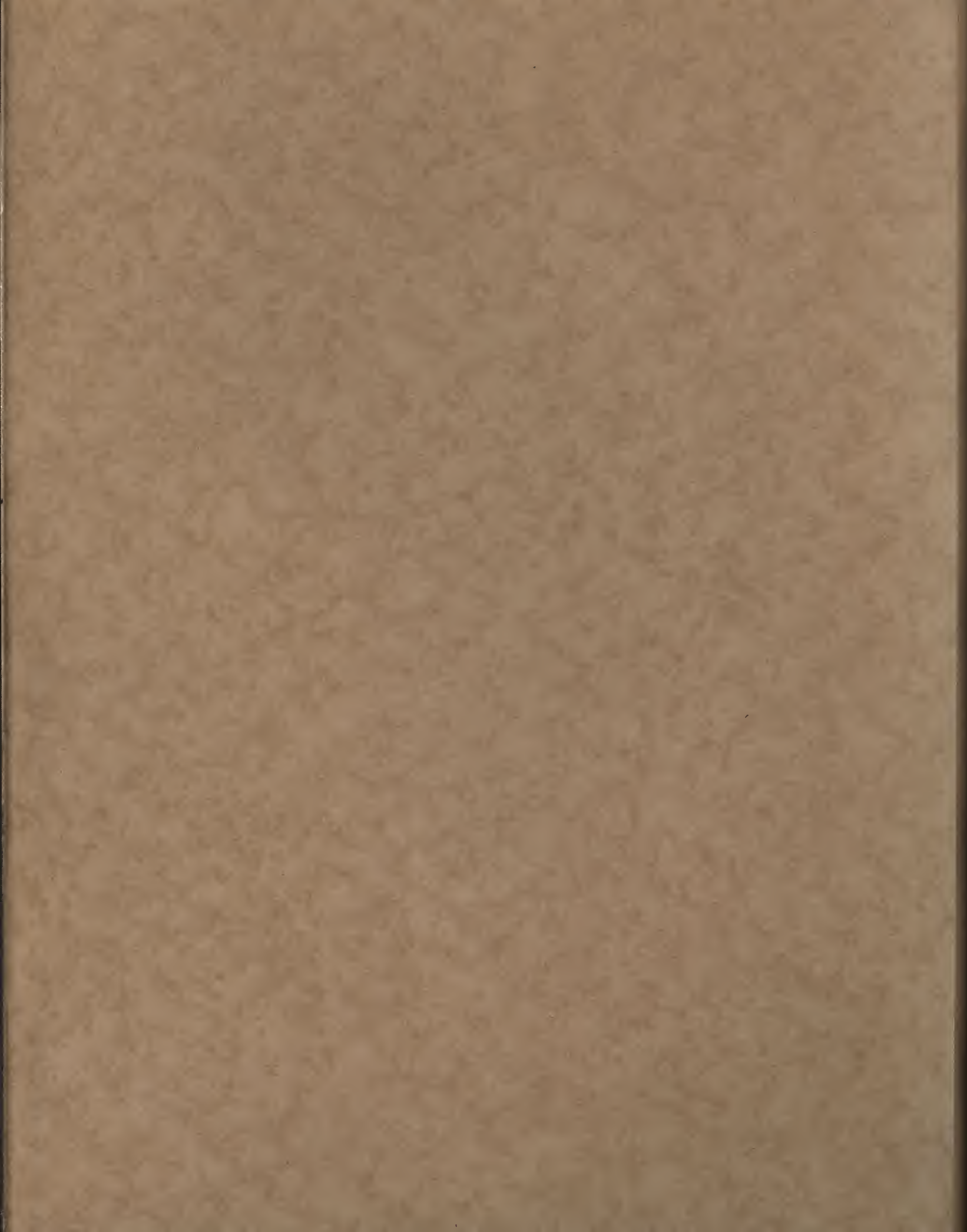
These casements shall be installed by the manufacturer. (If this is impractical for any reason, they can be set by local labor, but care should be exercised to see that they are erected according to the instructions sent with each shipment.) All joints between the steel sash and the collateral construction are to be made tight with the use of Crittall Mastic Cement (always supplied and included in all prices).

Extras to be included in above specifications if desired

1. Cleaning Hinges. Supply cleaning hinges on all outward opening casements,—or—supply cleaning hinges on all single outward opening casements and where required in groups of odd numbers of sash.
2. All casements shall be Y types, fitted with an angle glazing stop for glazing from the inside.
3. All outward opening casements shall have through-the-screen operators of malleable iron (or solid bronze).
4. The casements are to set directly into masonry without any sub-frame of wood, stone or metal. Supply continuous angle fin around the head and jambs of all openings for making a perfect joint between sash and masonry, per page 27, Catalog 1-26.

Note for specification writers

Standardized Casements are made in standard sizes and are sold at standard unit prices. It is entirely safe, therefore, to omit the often embarrassing phrase "or equal" and your client's interests will be protected by our standard prices.



Architects'
Catalog
1-26